

# A Conceptual Model for Semantic Interoperability in Heterogeneous IoT healthcare

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## Abstract.

The reliance of healthcare on IoT is increasing by the day to improve access to care, increase the quality of care and most importantly reduce the cost. Based on an individual's unique biological, behavioral, social and cultural characteristics. As we known, a smart city is a novel initiative to switch the conventional mode of services to the smart and well-groomed manner. The heterogeneous of internet of things (IoT) devices are referred to the different elements of communication protocols, data formats and technologies. This is also with the lack of acceptable standards and the limited interoperability tools. This paper proposed the conceptual model of using ontology for the semantic data interoperable of Big Data healthcare. Therefore, the main objective for this paper is to provide the ontology conceptual model in promoting IoT in smart city and overcoming a heterogeneous healthcare big data. The significance of this paper semantic interoperability between the heterogeneous smart devices in healthcare system.

**Keyword:** Ontology, Heterogeneous, Internet of things, Semantic, Healthcare